



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,795	02/06/2002	Vladimir I. Merkulov	UBAT:035US/10111376	7459
38396	7590	09/22/2004	EXAMINER	
JOHN BRUCKNER, P.C. 5708 BACK BAY LANE AUSTIN, TX 78739			SCHILLINGER, LAURA M	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,795

Applicant(s)

MERKULOV ET AL.

Examiner

Laura M Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 11-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/4/02.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 9/15/04.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 11-47 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claims, there being no allowable generic or linking claim. Election was made **without** traverse by the Applicant in a telephone conversation dated 9/15/04.

Applicant's election without traverse of claims 1-10 in a telephone conversation with the Examiner on 9/15/04 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Bower et al ('772).

In reference to claim 1, Bower teaches a method, comprising:

generating an electric field proximate an edge of a providing section of an electrode,
the electric field defining a vector (Col.4, lines: 23-35); and

Art Unit: 2813

forming an elongated nanostructure located at a position on a surface of a substrate (Col.6, lines: 48-60), the position on the surface of the substrate proximate the edge of the protruding section of the electrode, at least one tangent to the elongated nanostructure i) substantially parallel to the vector defined by the electric field and ii) substantially non-parallel to a normal defined by the surface of the substrate (Col.4, lines: 23-35 and Col. 8, lines: 40-51).

In reference to claim 2, Bower teaches the method of claim 1, wherein forming includes plasma enhanced chemical vapor deposition (Col.6, lines: 33-45).

In reference to claim 3, Bower teaches the method of claim 1, wherein forming the elongated nanostructure includes forming a plurality of substantially aligned nanostructures (Col.8, lines: 40-45)).

In reference to claim 4, Bower teaches the method of claim 3, wherein the plurality of substantially aligned nanostructures include a plurality of carbon nanofibers (Col.3-4, lines: 65-10).

In reference to claim 5, Bower teaches the method of claim 3, wherein the plurality of substantially aligned nanostructures includes a plurality of carbon nanotubes (Col.3-4, lines: 65-10).

Art Unit: 2813

In reference to claim 6, Bower teaches the method of claim 3, wherein the plurality of substantially aligned nanostructures are formed using a plurality of catalyst nanoparticles including at least one element selected from the group consisting of nickel, iron and cobalt (Col.3-4, lines: 65-10).

In reference to claim 7, Bower teaches the method of claim 1, further comprising:
changing a direction associated with the vector; and
continuing to form the elongated nanostructure (Col.8, lines: 20-40).

In reference to claim 8, Bower teaches the method of claim 7, wherein changing the direction associated with the vector includes moving the protruding part of the electrode relative to a nonprotruding part of the electrode (Col.8, lines: 20-40).

In reference to claim 9, Bower teaches the method of claim 1, further comprising moving the substrate relative to the edge of the protruding section of the electrode (Col.8, lines: 20-40).

In reference to claim 10, Bower teaches the product made by the method of claim 1 (see citations of claim 1).

Conclusion

Art Unit: 2813

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LMS

9/16/04